Does Sequence Matter in Free Trade Area?

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Motivations

- Korea and her major trading partners,..geo-political, centripetal forces
- Korea as a small open economy

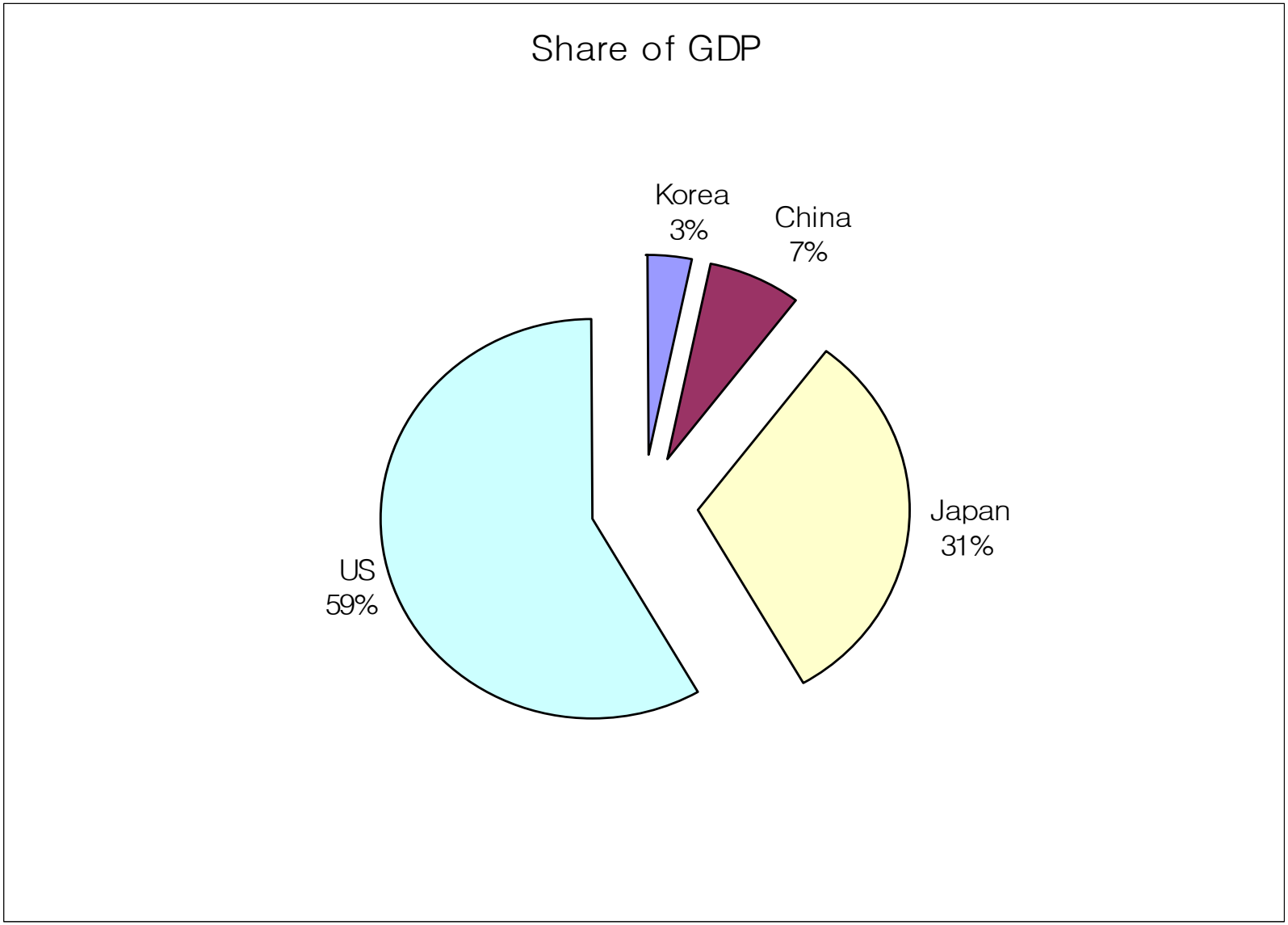
(1) 1960-1995, investment boom with trade reform, Nam and Kim(2000)

(2) shortage of saving capacity, Hahn(1995)

(3) FDI and growth of manufacture, Hong(1997), KIET(2001)

- Levine and Renelt(1992), Baldwin and Seghezza(1996), Baldwin(1992)
- Trade policy as a long run strategy

Capital formation and growth


Share of GDP
Korea
3%
China
7%
Japan
31%
US
59%

	Korea	*China*	*Japan*	*US*
GDP	445611.9	996281.8	4253850	7955888
Share of World GDP	1.5%	3.4%	14.7%	27.4%
Exports	165174.5	312426.8	515709.1	869701.6
Imports	158711.5	313085.9	418255.5	1032047
EXP/GDP	37%	31%	12%	11%
IMP/GDP	36%	31%	10%	13%
	Korea	*China*	*Japan*	*US*
Share of World's Capital Stocks				
	1.6%	3.2%	18.5%	22.1%

Table 1.

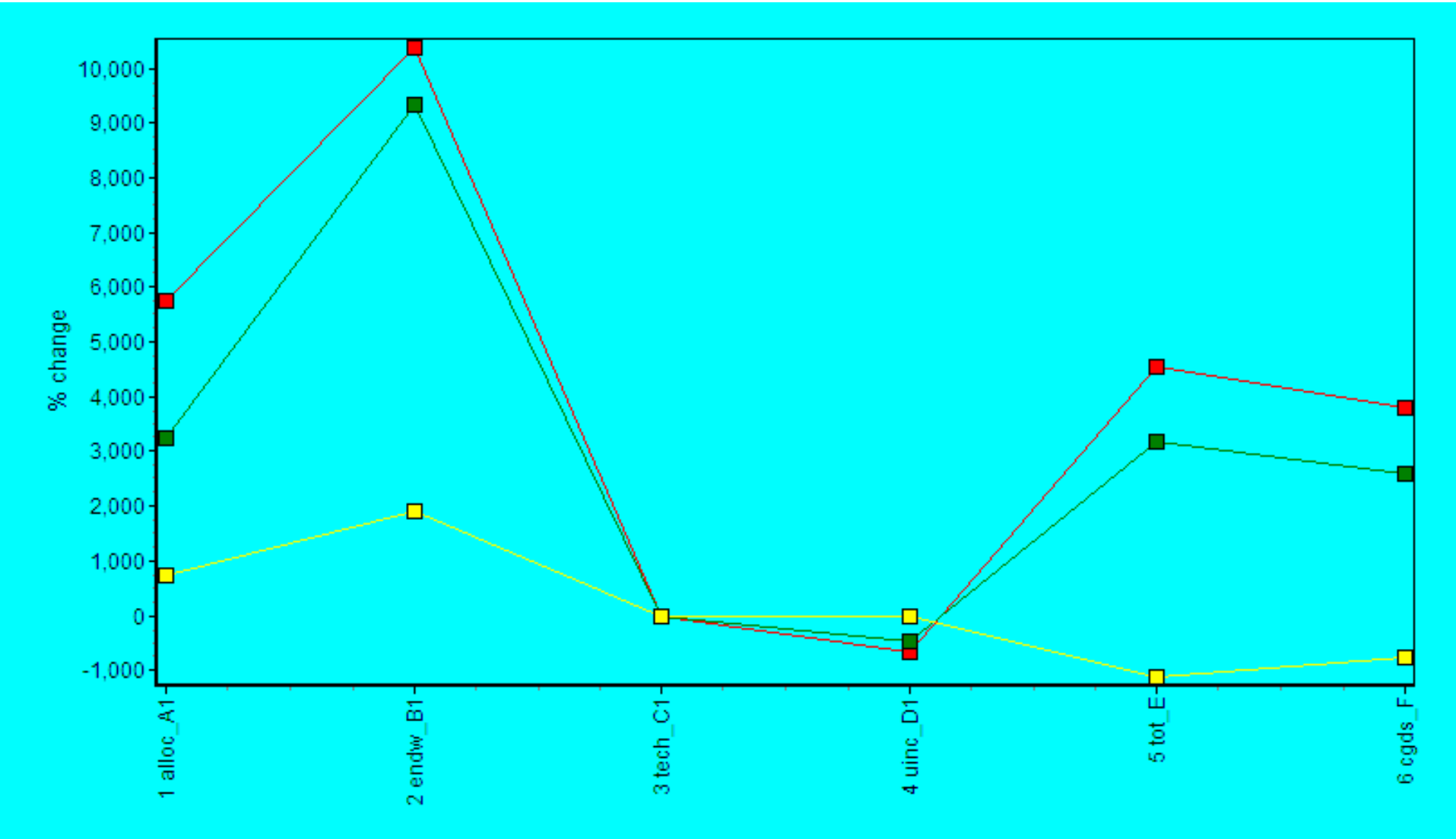
Scenarios	First event	Second event	Third event	Fourth event
1	China WTO	Korea-China	-Japan joins	-US joins
2	China WTO	Korea-China	-US joins	-Japan joins
3	China WTO	Korea-Japan	-China joins	-US joins
4	China WTO	Korea-Japan	-US joins	-China joins
5	China WTO	Korea-US	-China joins	-Japan joins
6	China WTO	Korea-US	-Japan joins	-China joins

Theoretical Aspect

- Standard GTAP Model
- +
- Francois(1996)'s closure(endogenous capital stock and saving rate)
- => intertemporal maximization and capital formation(Baldwin 1992)
- => tariff-> rate of return-> capital -> GDP

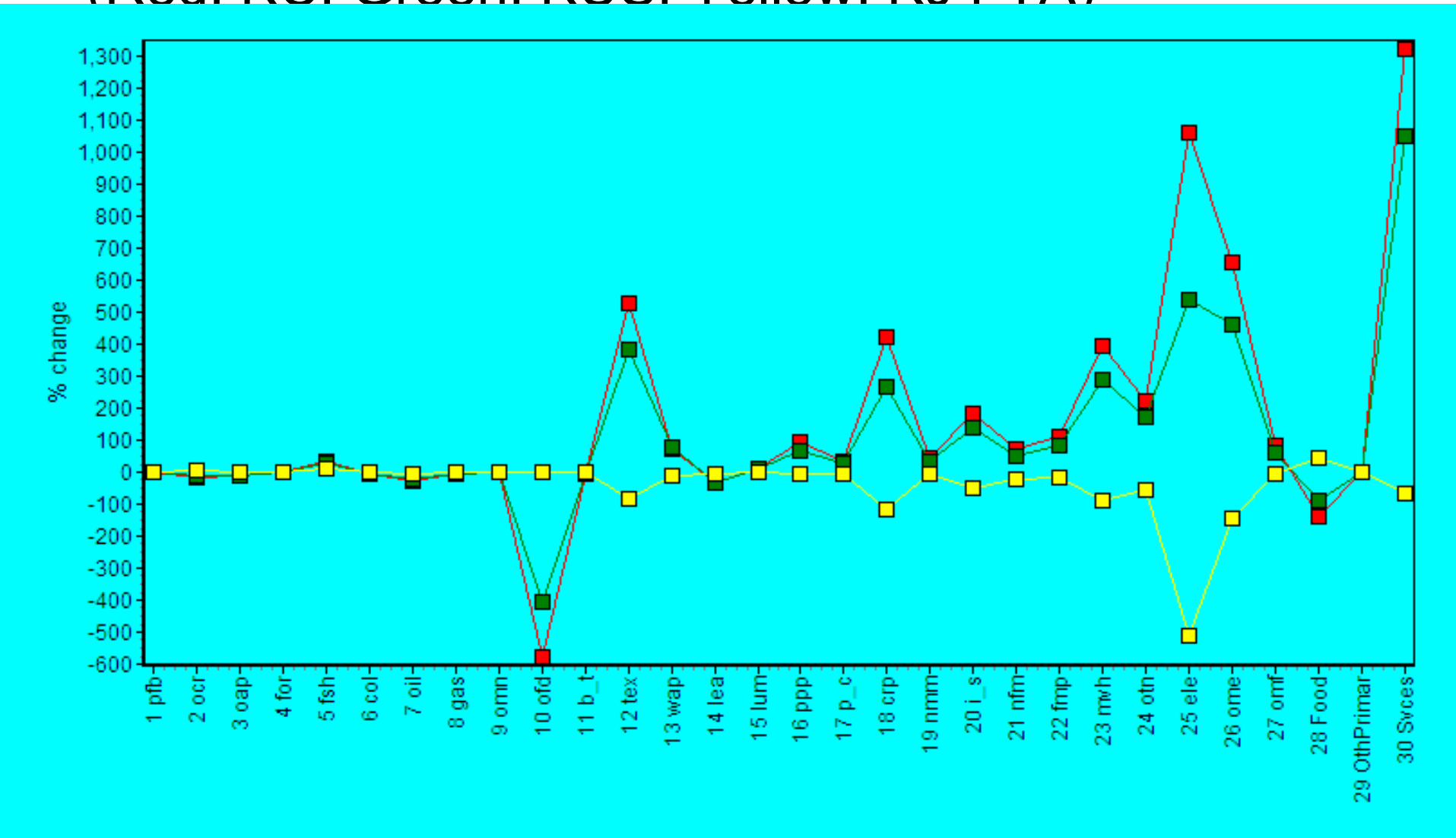
With both static and dynamic effects	Korea-China	Korea-Japan	Korea-US
Rate of growth	3.59%	0.6%	2.8%
Capital stock increase	6.02%	1.13%	5.45%
Allocative effect	5764.5	746.4	3227.3
Terms of trade effect	4535.8	-1123.7	3164.2
With only static effect	Korea-China	Korea-Japan	Korea-US
Rate of growth	0.86%	0.18%	0.34%
Capital stock increase	0%	0%	0%
Allocative effect	3831.2	818.6	1507.5
Terms of trade effect	1306.5	545.5	-397.4

Welfare summary
(Red: KC, Green: KUS, Yellow: KJ FTA)

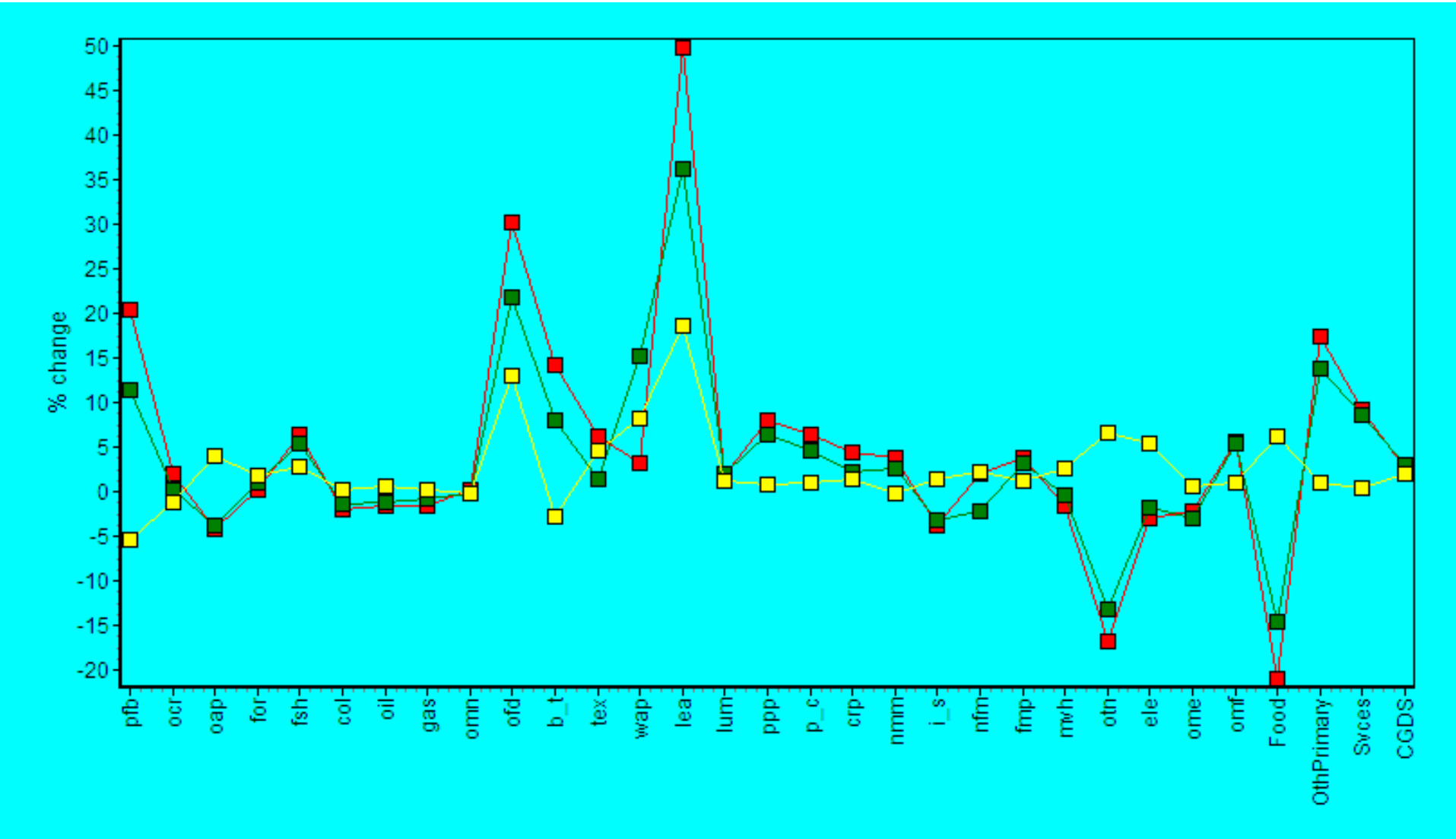


Terms of trade

(Red: KC. Green: KUS. Yellow: KJ FTA)

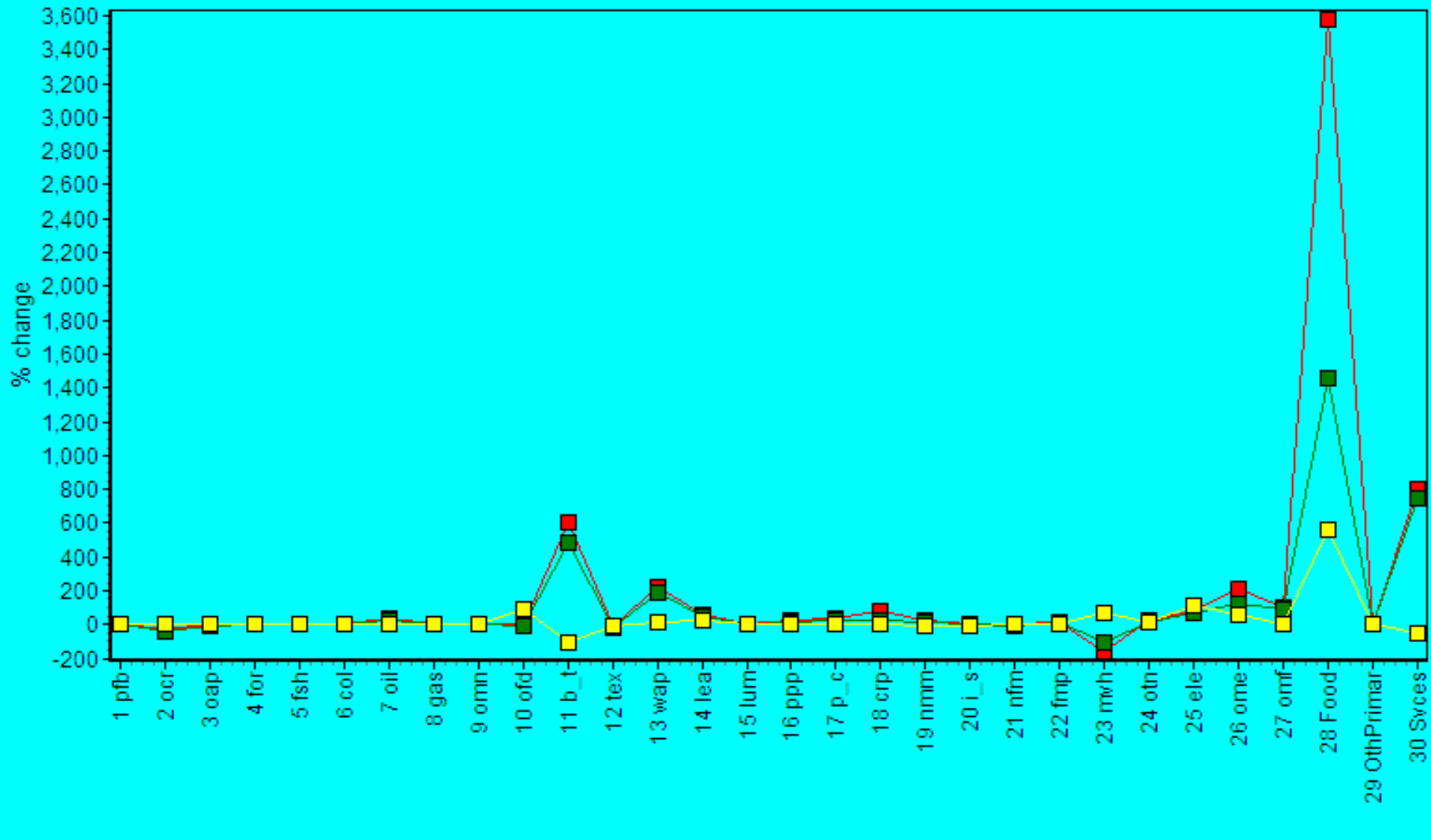


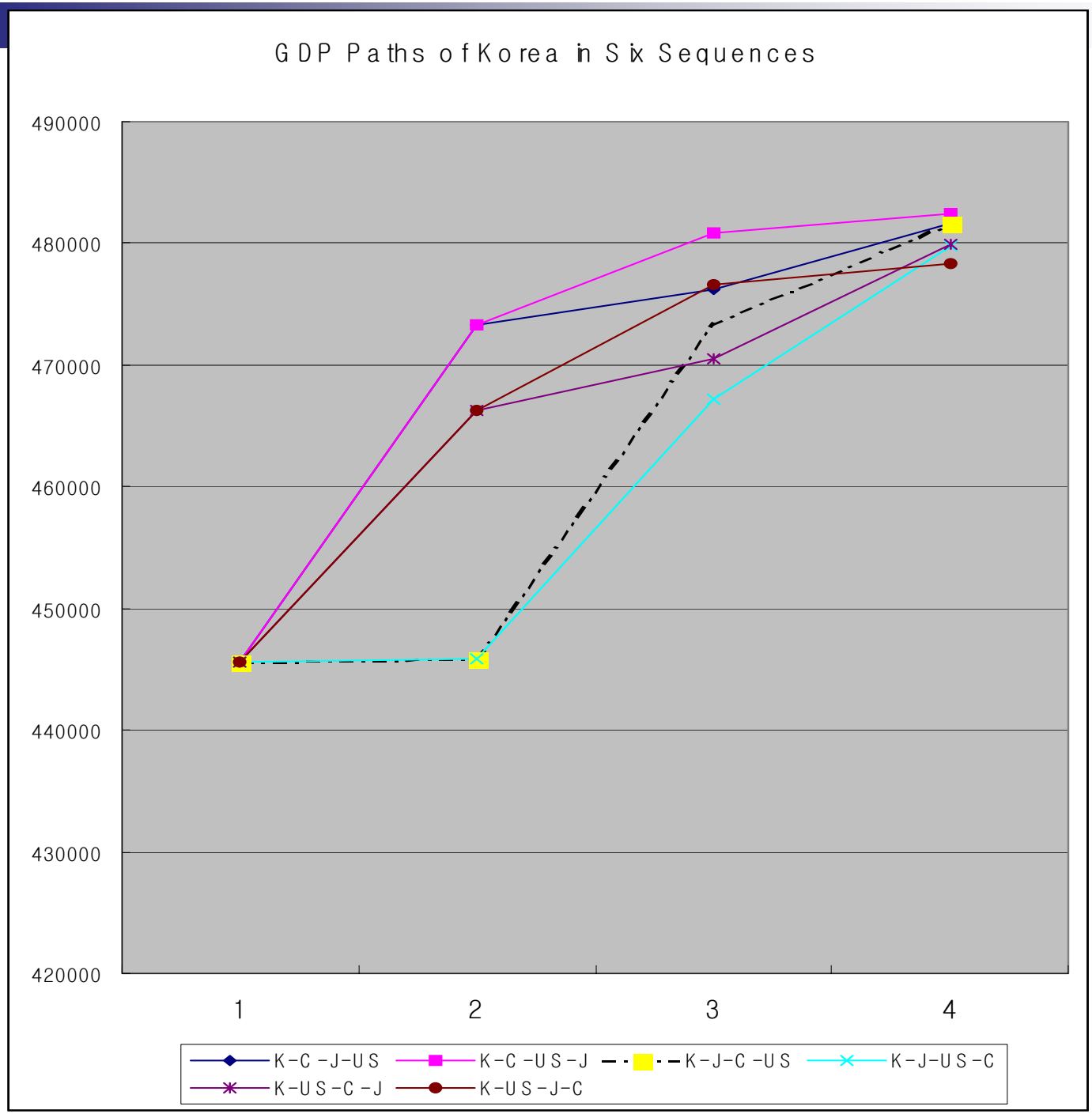
Capital reallocation by sectors in Korea



Allocative Efficiency

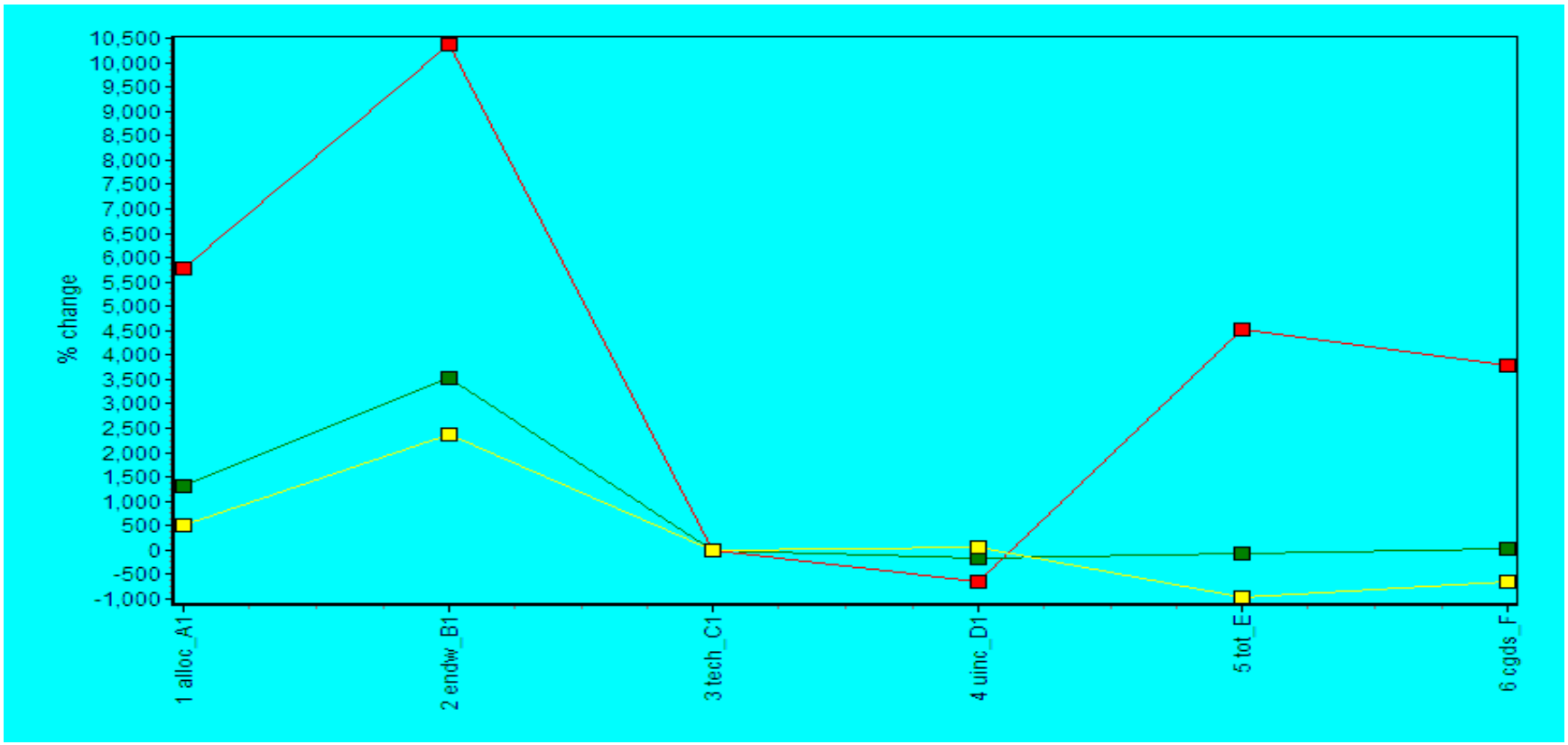
(Red: KC, Green: KUS, Yellow: KJ)




GDP Paths of Korea in Six Sequences
490000
480000
470000
460000
450000
440000
430000
420000
1
2
3
4
K-C-J-US
K-C-US-J
K-J-C-US
K-J-US-C
K-US-C-J
K-US-J-C

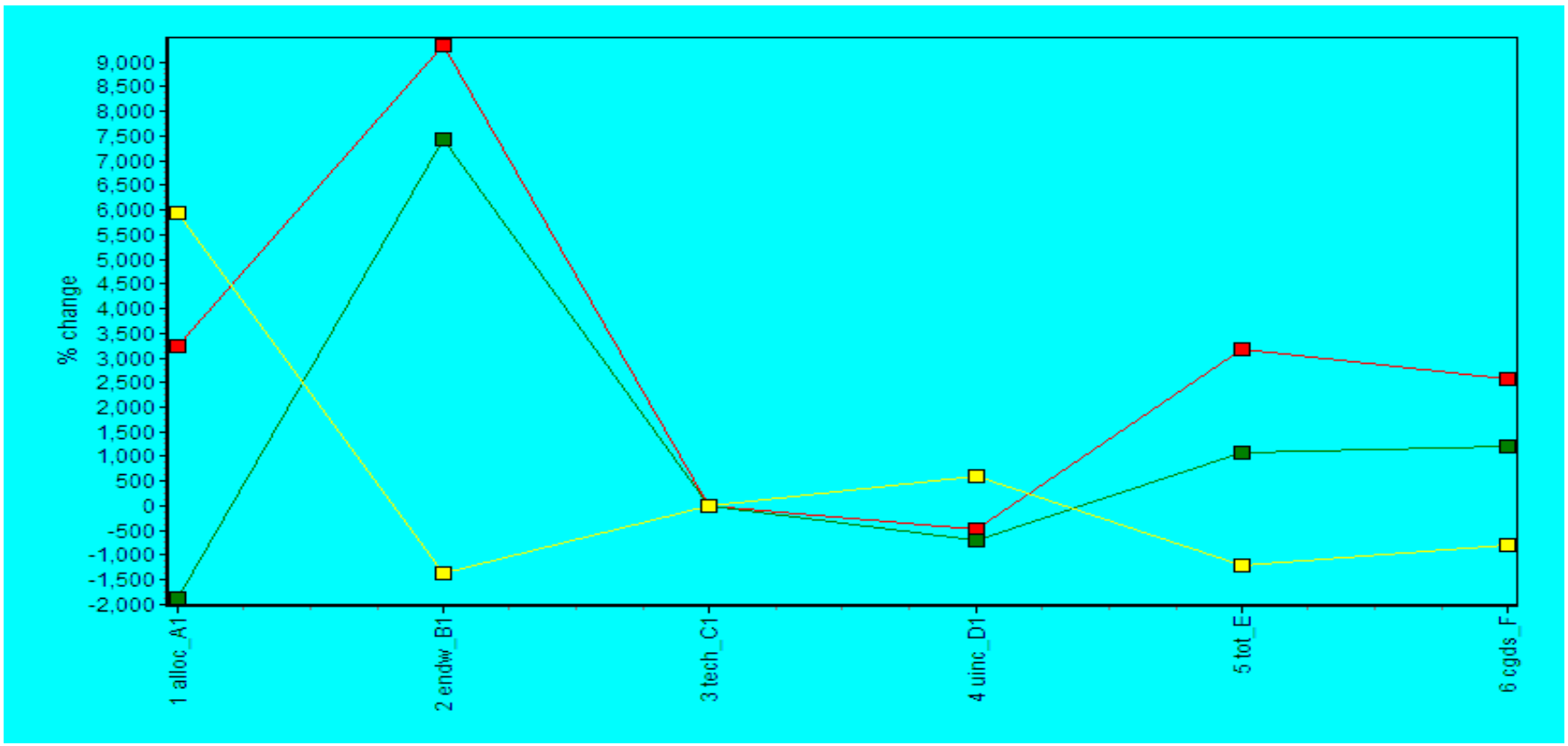
Welfare Decompsition

(Red: After KC, Green: after KC-US joins, Yellow: KCUS-Japan joins)



Welfare Decompsition

(Red: After KUS, Green: after KUS-J joins,
Yellow: KUSJ-C joins)



Simulation results

- For volume, price changes, employment, and so on….China>US> Japan, there “is” a “small” discrepancy in final effect…
- KJ sometimes gives an opposite effect to the case of KC or KUS.
- (eg) terms of trade in etxtiles, chemical products, auto, electronics, agricultrue products

Korea-Japan FTA sounds like

- Comparative advantage in the world Market ≠ KJ regional market (agriculture, textiles, chemical products, steel, auto, electronics)

→ Capital allocation does not raise allocative efficiency

Back to the Question, "Does Sequence Matter in Free Trade Area?"

- Yes.
- Different sequence may have different growth path(and thus different political process towards FTA).
- For final GDP and many other aspects of the Korean economy, small discrepancy(0.9% of GDP)
- Tariff reduction is a way of subsidizing capital accumulation especially in the case of Korea.

Why are they different?

- Tariff size(China >> 0)
- In reality, adjustment cost in investment, capital installation by sectors, so sequence matters

Policy Implication

- Bigger big bang should come before smaller big bang, not the other way around.